FIELD GUIDE
TO THE NATIVE TREES OF
MANITOBA

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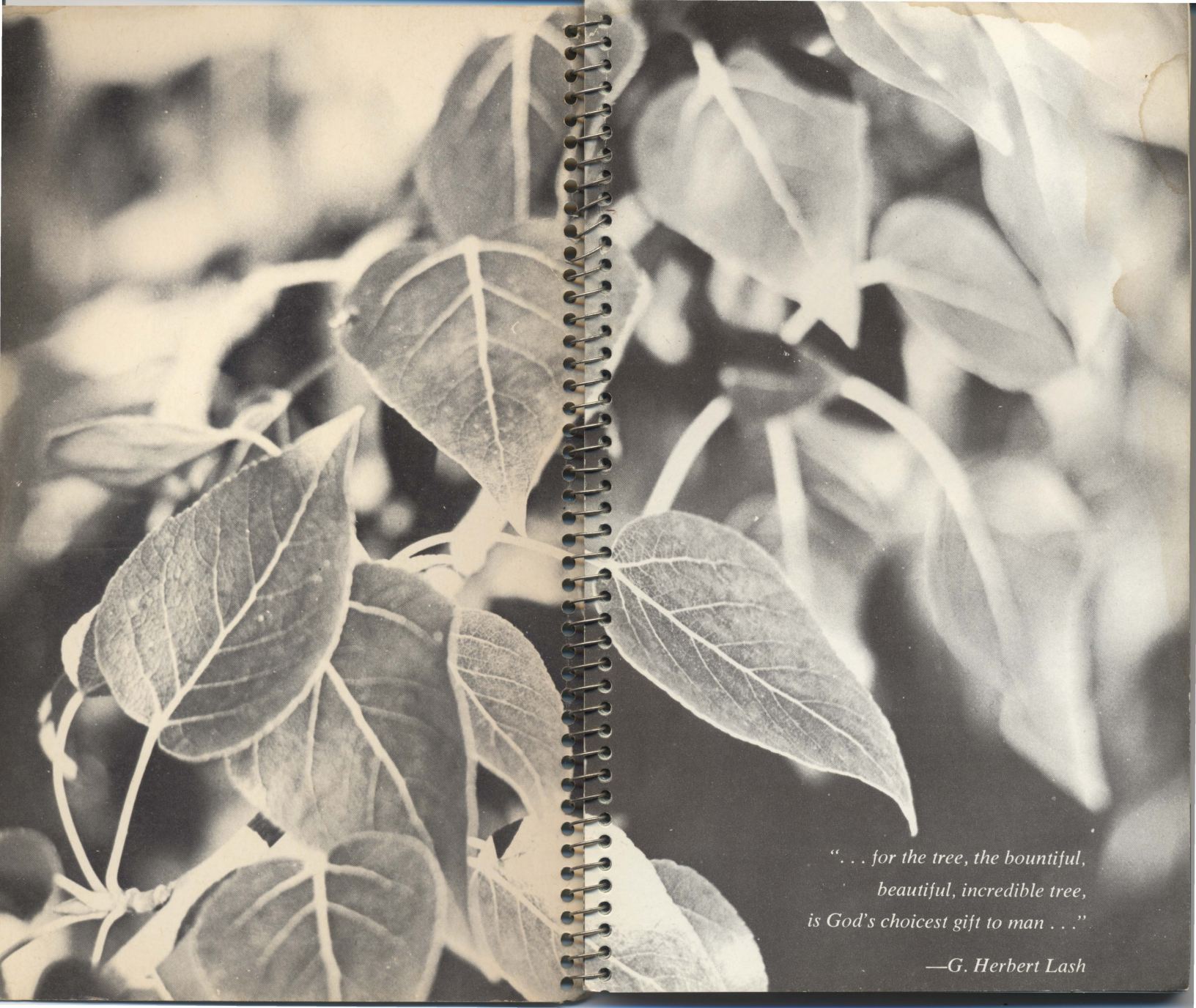
Canadian Forestry Service
Department of Fisheries and Forestry


". . . for the tree, the bountiful,
beautiful, incredible tree,
is God's choicest gift to man . . ."
—G. Herbert Lash

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Book layout and design: John Wiens

Trembling aspen, White Lake

Preface

There are many excellent books on trees available in public libraries and bookstores. Few if any, however, confine their coverage to the Canadian prairies, let alone the province of Manitoba.* This dearth of regional material can be vexing to the local resident, who, it may be said, in a desire for chops has had little recourse but to contract for the whole hog.

Here then is a platter of chops. The meat is lean, and we hope, served to the reader's taste. We include only trees native to Manitoba — trees whose roots reach deep into her history as well as her soil. While a few occur solely in localized areas, the majority can be spotted by most Manitobans within a half day's drive from home.

School children as well as those who find pleasure in fishing, hunting, boating, or just strolling through a glade will, we hope, find this book a good companion. Technical language has, wherever possible, been reduced to simple words. Where this has not been practical the terms have been defined and illustrated in a brief glossary found on page 10. As to the photographs, wherever possible they were taken in the field and so reflect the natural setting of their subjects. Most of the twigs, fruit, and flowers, because of their fragility and size, were photographed in the laboratory.

*"Native Trees of Canada", also published by this department, is recommended for anyone wishing photographs with botanical descriptions of all Canadian trees.

A warning about tree form. Not all members of a species look alike. Those growing in dense stands — usually in a natural forest — tend to shed their lower branches. These are commonly more pole-like and narrower - crowned than those growing in open areas. Moreover, frequently a species will grow into a typical tree form (with one central trunk) in one area yet hardly develop into more than a shrub (several trunks) in another. So the shape of a tree alone is not always a good guide to identification. In this guide a tree is defined as a woody plant having one well-defined trunk, a recognizable crown, and growing to a minimum height of 15 feet at maturity with a trunk diameter of not less than two inches.

Acknowledgements — Many have helped us in preparing the material for this book. Firstly we are indebted to numerous authors of other publications on the subject whose observations have helped considerably in preparing the basic text. For the care and attention in handling many of the close-up photographs taken in the laboratory we express our appreciation to Bob Cheale and Ed Rayner. Ed Rayner's excellent processing of literally hundreds of 35 mm frames taken in the field for this book is also gratefully acknowledged. To Bill Cumming, Wilbert Ronald, and Bill Meseman, we owe special thanks for helping us locate, identify and collect specimens from several of the less common species. And finally our thanks to Ross Waldron, silviculturist and colleague, whose helpful editing, advice, and enthusiasm for the book made our task easier and all the more enjoyable.

—Edward T. Oswald
Frank H. Nokes

How "Keys" help you identify trees

Like people in a crowd, trees in a forest tend to look alike. But look at their leaves and twigs and you'll find each has a character and distinctiveness of its own. Keys are designed to tie these features together in such a way that you can use them to identify all 24 native Manitoba trees fairly simply.

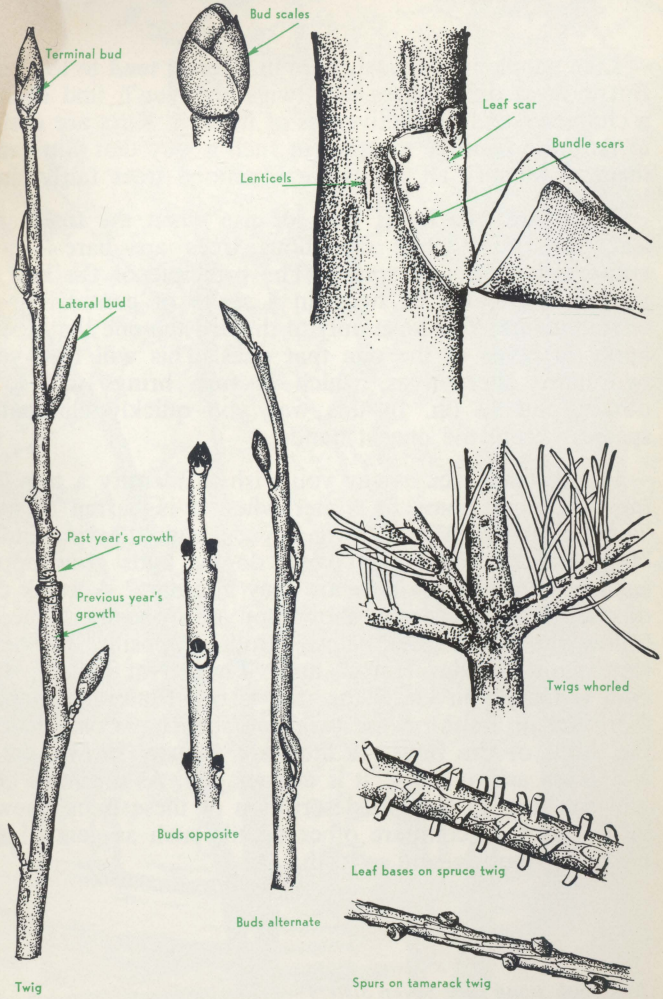
There are two keys: one for use when the trees are in leaf, the other when deciduous trees are bare — in the autumn, winter, and spring. The principle of the key is to present the leaves or twigs in a series of contrasting pairs of statements. You have only to discard the one that does not apply in favor of the one that does. This will lead you to two more alternatives, which in turn brings you to two others, and so on. In this way you quickly eliminate all species except the one at hand.

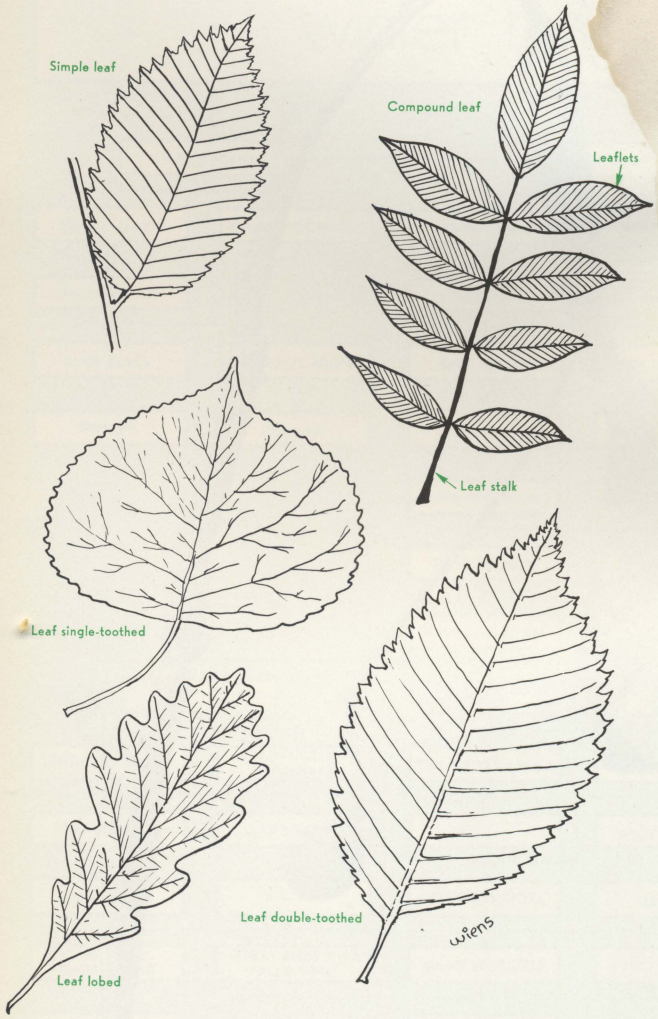
For instance, let us say you wish to identify a tree growing near your home in winter when it is barren of leaves. Turning to the Winter Twig key on page 13 you find two choices at the top of the page: do the buds grow opposite each other on the twig or are they alternate? A quick check of one of the twigs may show they are opposite. Hence you follow the ruled lines below "Buds Opposite" to the two statements, "Twigs Hairy" and "Twigs Not Hairy". If the twig is hairy you know the tree is our Manitoba maple. If there are no hairs on the twig you then have only to check the color of the buds. If they are a rusty brown the tree is a green ash; if black, it is a black ash. As a double check, you can turn to the full description of these trees elsewhere in the book to compare other details such as general form, bark, distribution, and so forth.

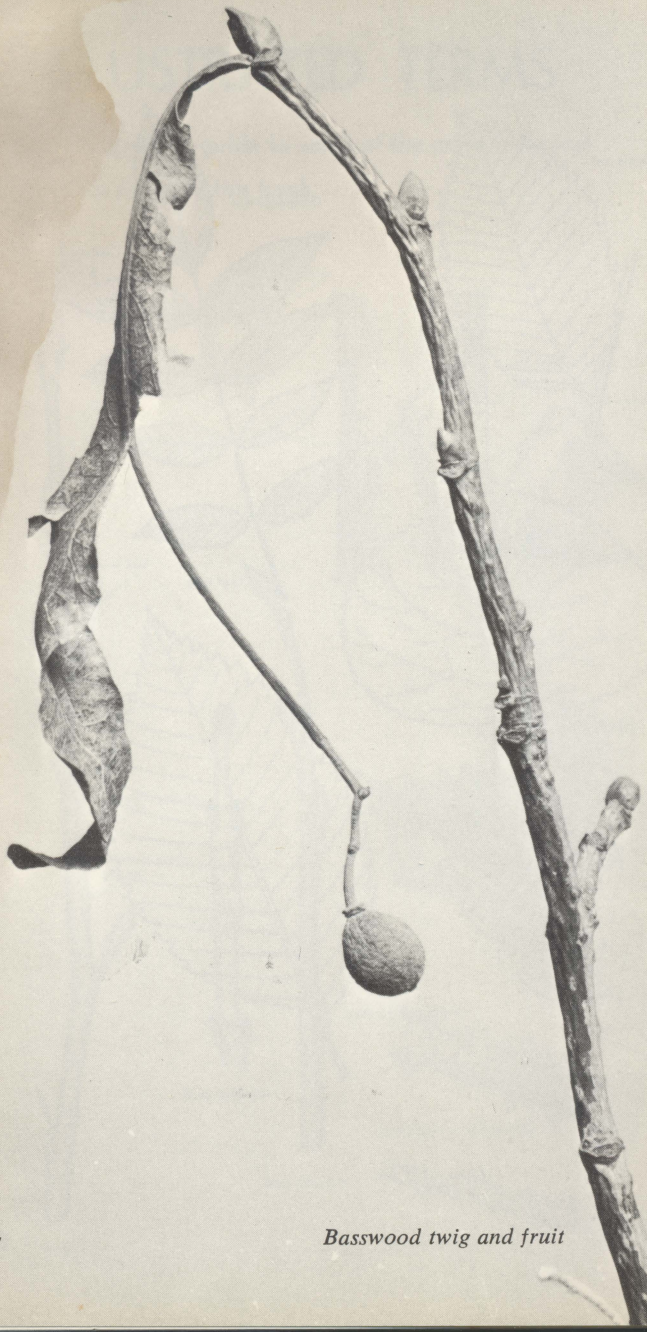
Black ash stand near Seven Sisters

ILLUSTRATED TERMS

. . . a graphic guide to some of the more technical terms found in this book.



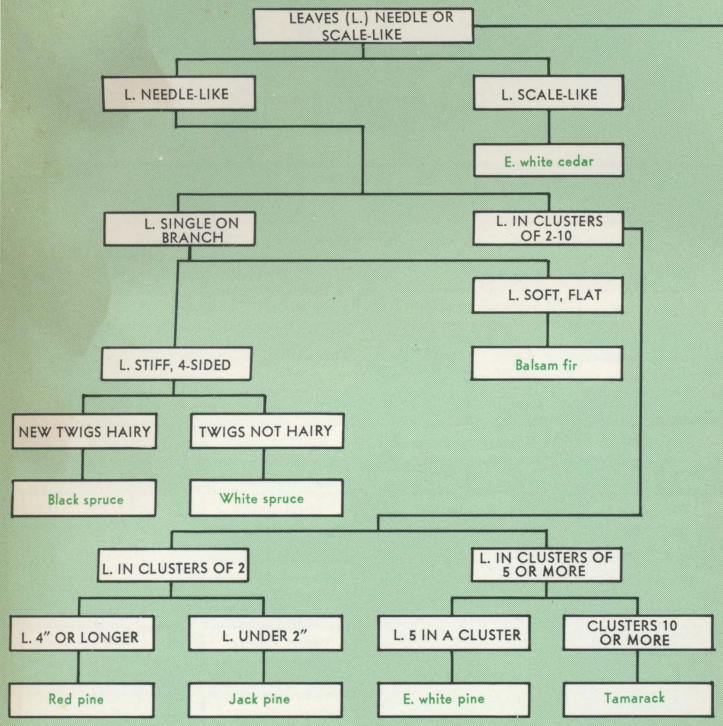




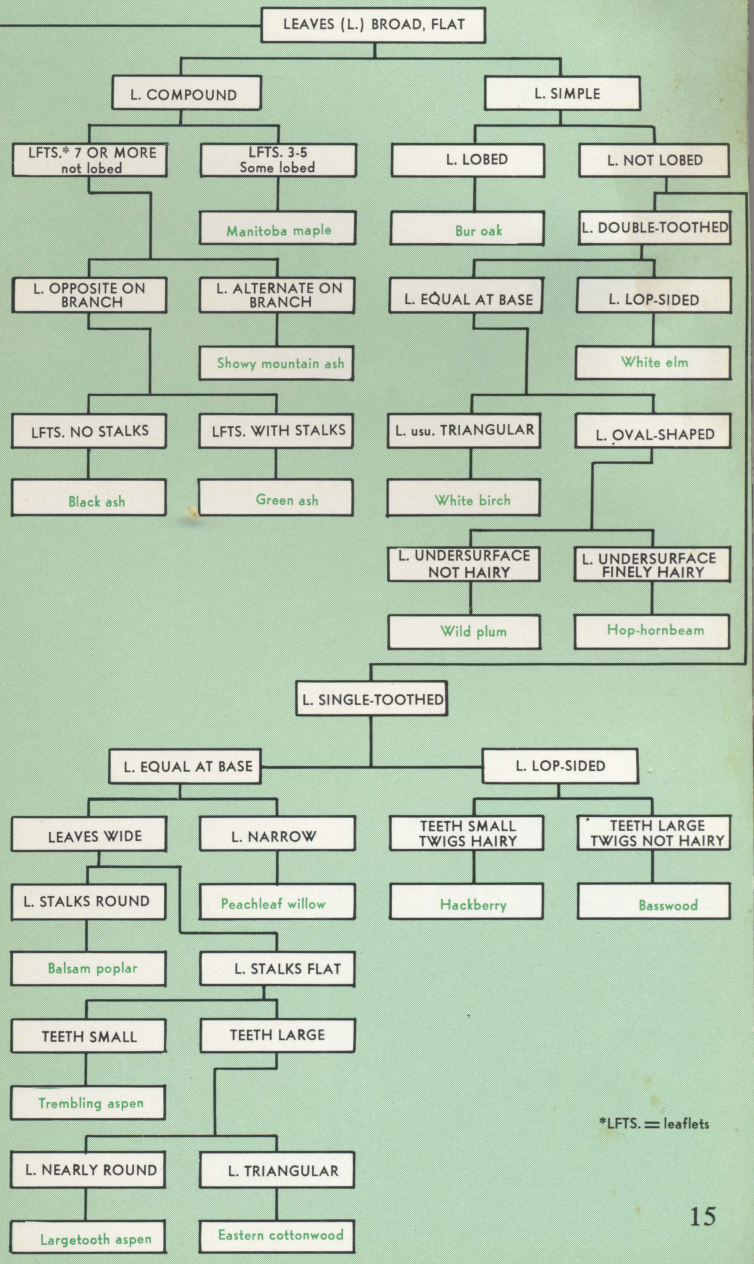
Basswood twig and fruit

Key to trees based on their winter twigs

- BUDS OPPOSITE
  - TWIGS HAIRY
    - Manitoba maple
  - TWIGS NOT HAIRY
    - BUDS BLACK
      - Black ash
    - BUDS RUSTY BROWN
      - Green ash
- BUDS ALTERNATE
  - SPURS ALONG TWIG
    - Tamarack
  - TWIGS NO SPURS
    - BUDS STICKY
      - BUDS HAIRY
        - Showy mountain ash
      - BUDS NOT HAIRY
        - TWIGS RIDGED
          - Eastern cottonwood
        - TWIGS SMOOTH
          - Balsam poplar
    - BUDS NOT STICKY
      - TWIGS FUZZY OR HAIRY
        - LENTICELS ROUND
          - LEAF SCARS ⌣
            - Hop-hornbeam
          - LEAF SCARS ⌓
            - Wild plum
        - LENTICELS ELONGATED
          - LATERAL BUDS AGAINST TWIG
            - Hackberry
          - LATERAL BUDS AWAY FROM TWIG
            - TERMINAL BUD BLUNT
              - White elm
            - TERMINAL BUD SHARP
              - Largetooth aspen
      - TWIGS NOT FUZZY OR HAIRY
        - TIPS WITH 3-4 BUDS
          - Bur oak
          - TWIGS SMOOTH
            - MANY LENTICELS
              - White birch
            - FEW LENTICELS
              - BUDS SINGLE SCALE
                - Peachleaf willow
              - BUDS MANY SCALES
                - Trembling aspen
        - TIPS WITH SINGLE BUD
          - TWIGS WRINKLED
            - Basswood

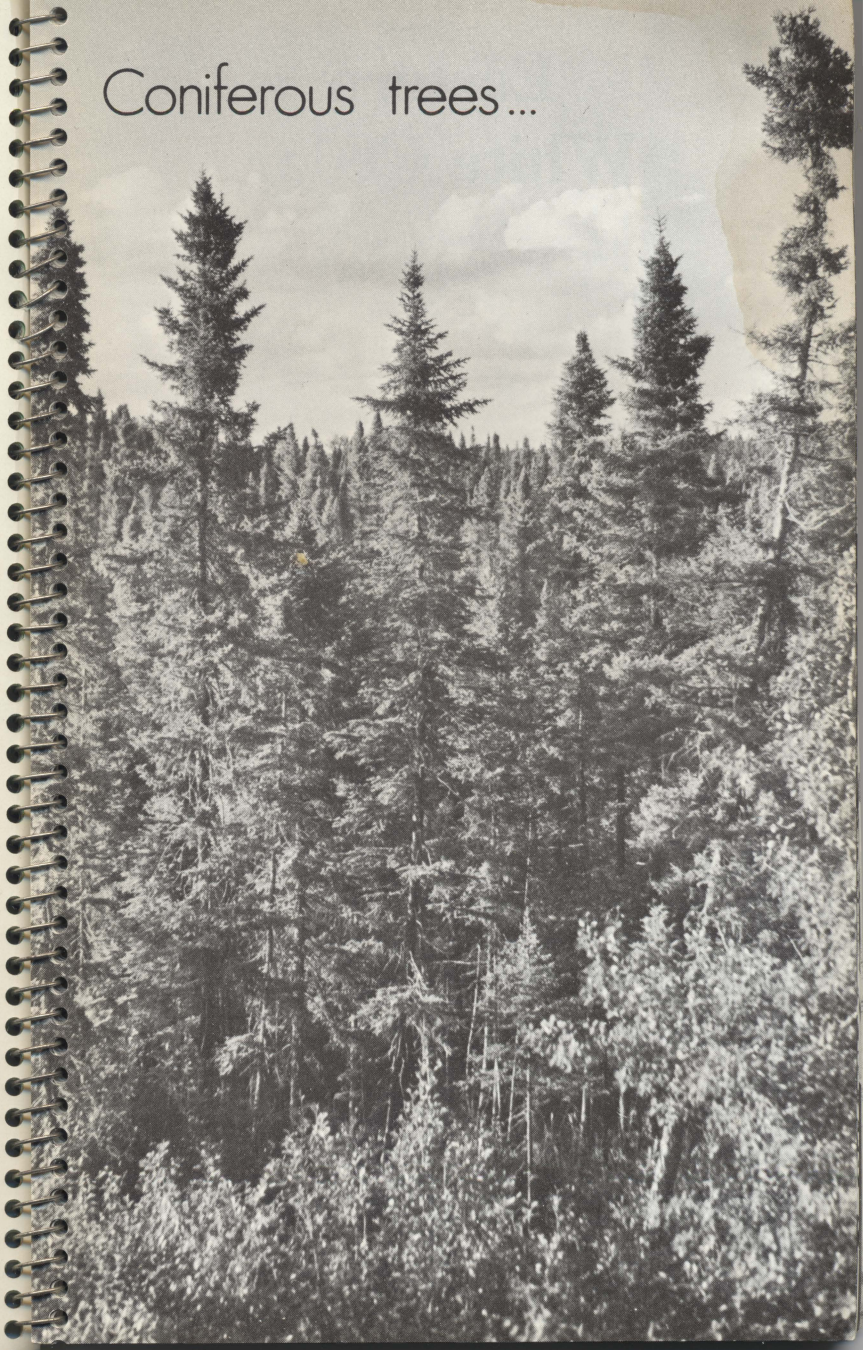


Key to trees based on their leaves



*LFTS. = leaflets

Coniferous trees...

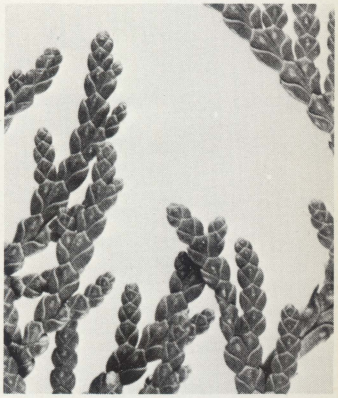


Black spruce, Whiteshell Provincial Park

Eastern White Cedar

Arbor-vitae

Thuja occidentalis L.



FORM: A dense, compact evergreen tree with a cone-shaped crown, often occurring in clumps.

BARK: Thin, shreddy, with narrow elongated fibrous strips; reddish to pale brown.

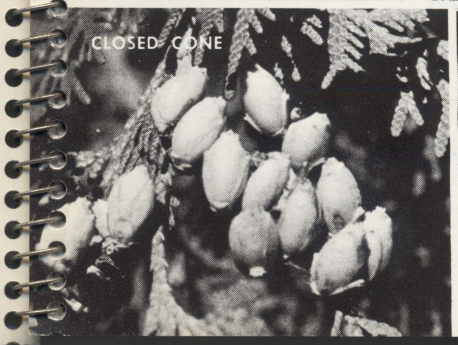
TWIGS: Alternate, slender, flattened, fan-shaped, covered with green sharp-pointed scales that become brown with age and are shed in 3-4 years. Leaf buds are covered with leaves but cone buds slightly emerge at tips of some branchlets.

LEAVES: Scale-like, paired, overlapping, short, 1/8-1/4 inch, tight against twig, yellowish green.

FLOWERS: May, solitary at tip of twig, yellow or pink, small, oval.

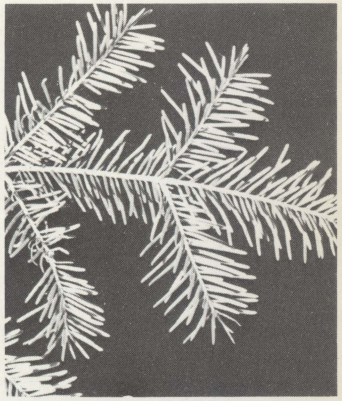
FRUIT: An oblong erect cone about 1/2 inch long with 4-6 pairs of thin brown rounded cone scales.

OCCURRENCE: Mostly in wet habitats in southeastern Manitoba but occasionally between Lake Winnipeg and Lake Winnipegosis as far north as Grand Rapids.



Balsam Fir

Abies balsamea (L.) Mill.



FORM: A moderately dense evergreen tree with a slender symmetrical spire-shaped crown.

BARK: Grey, smooth to roughened by raised resin blisters on young trees becoming cracked and scaly on older trees.

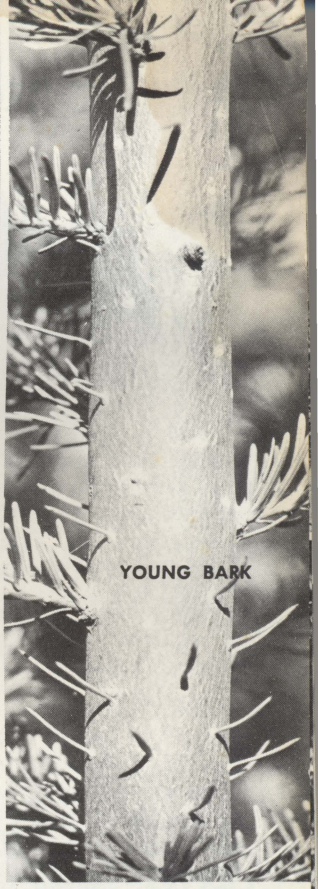
TWIGS: Opposite, grey, slender, smooth, more or less hairy. Buds about 1/8 inch long with greenish-brown scales covered with resin.

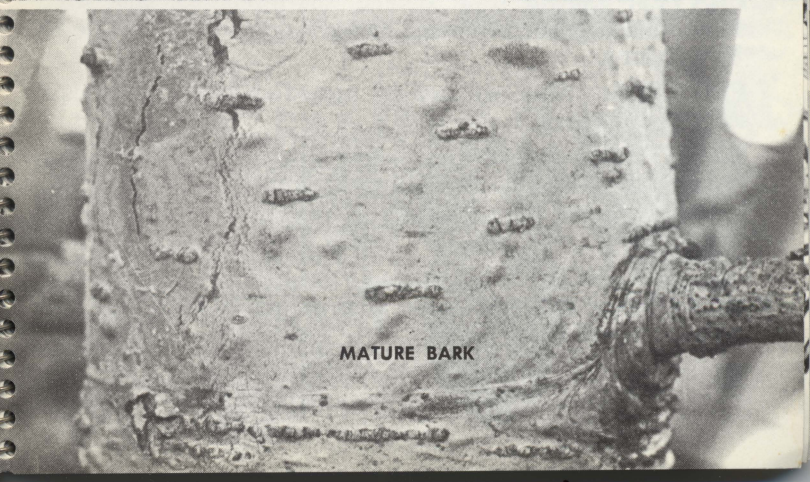
LEAVES: Single, flat, twisted at base, needle-like, soft, rounded or notched at tip, 3/4 to 1 inch long, usually spreading into one plane; whitened below along two lines.

FLOWERS: April-May, solitary from base of previous year's leaves, red or purple, oval.

FRUIT: An erect oblong dark purple cone with thin scales attached to upper side of branches, 2 to 3 1/2 inches long; disintegrating at maturity leaving cone axis on branch.

OCCURRENCE: Fairly common throughout forested region, except extreme north, in moist habitats; usually mixed with other tree species.





Black Spruce

Picea mariana (Mill.) B.S.P.

FORM: A dense evergreen tree; crown generally irregularly pyramidal and symmetrical but tip often club-shaped; lower branches extending to ground with tips upturned.

BARK: Thin brown to greyish scales; inner bark olive-greenish tinged.

TWIGS: Irregularly whorled, hairy, light brown when young, darkening with age, roughened by outward pointing leaf bases. Buds slightly hairy, 1/8 inch long with many overlapping brown scales.

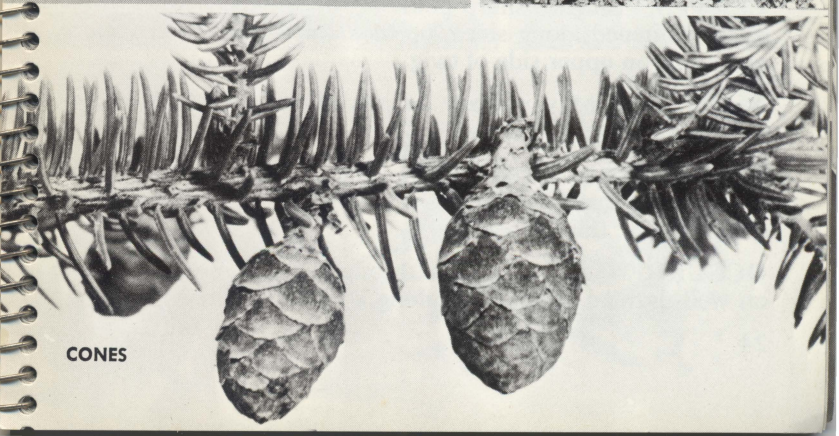
LEAVES: Single, short stalked, sharp-pointed, stiff, four-sided, bluish green, whitened along sides, needle-like, about 1/2 inch long.

FLOWERS: May, solitary on preceding year's twig, dark red or purple, oval.

FRUIT: Egg-shaped cones about one inch long with thin brown scales, usually remain on the tree for more than one year; most trees have a cluster of persistent cones near the top.

OCCURRENCE: Wide-spread throughout the forested region; in the south mostly in bogs or wet habitats but often on mineral soil in the north.

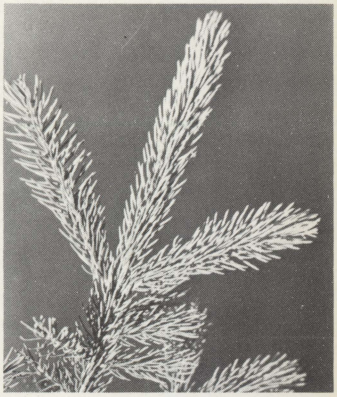
FLOWER



CONES

White Spruce

Picea glauca (Moench) Voss



FORM: A dense evergreen tree with a pyramidal crown composed of horizontal branches, often the lower branches having upturned tips.

BARK: Thin, grey to brown scales which flake off readily on older trees; inner bark cinnamon to light silverish-white.

TWIGS: Irregularly whorled, yellowish-brown, becoming darker with age, covered with small, elongated, spirally arranged leaf bases making twigs and branches rough. Buds ¼ inch long with many overlapping brown scales.

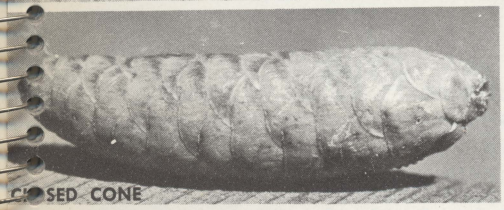
LEAVES: Single, sharp-pointed, needle-like, stiff, four-sided, whitened along sides, up to about ¾ inch long; more numerous on upper side of twig.

FLOWERS: May, solitary on preceding year's twig, red or yellow, oval.

FRUIT: Cones which usually drop in one year but some often persist scattered about the crown; 1½ to 2 inches long; scales brown, thin.

OCCURRENCE: Common throughout the forested region on well-drained habitats or along streams and around lakes.

OPEN CONE



CLOSED CONE

FLOWERS

Red Pine

Pinus resinosa Ait.

FORM: A large evergreen tree with a round symmetrical, open crown; devoid of lower branches especially in dense stands, branches nearly horizontal.

BARK: Reddish-brown with smooth broad scaly plates.

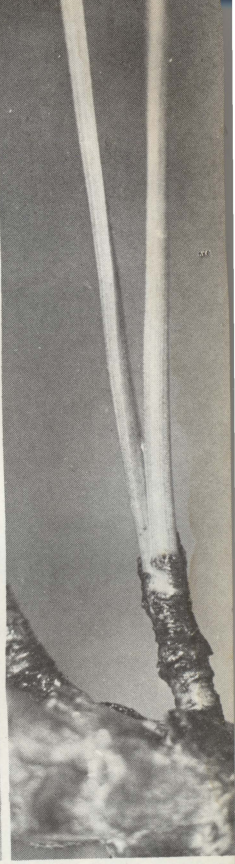
TWIGS: Opposite or single, light brown but soon darkening, stout, roughened by projecting leaf bases. Buds up to ¾ inch long with many reddish-brown scales with tips turned back.

LEAVES: Needle-like, 4 to 6 inches long, in clusters of two with a brown sheath at base, soft, minutely toothed.

FLOWERS: May, in clusters near tip of twig, red or purple, elongated.

FRUIT: A stalkless egg-shaped cone, 1½ to 2 inches long; scales thickened at outer edge but not barbed.

OCCURRENCE: In dry habitats in southeastern Manitoba, also on Black Island, Lake Winnipeg; not common.



CONES

Jack Pine

Pinus banksiana Lamb.

FORM: A medium sized evergreen tree with a narrow open crown; crown rather small in dense stands but becomes bushy extending to near the ground in open areas.

BARK: Brownish with thin irregularly furrowed scales.

TWIGS: Whorled, reddish-brown, slender, usually with narrow elongated ridges, slightly roughened by leaf bases. Buds about 1/4 inch long, with many small brown sticky scales.

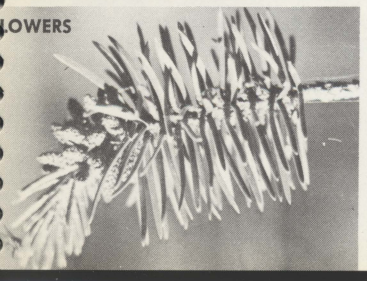
LEAVES: Needle-like, 3/4 to 2 inches long, stiff, in clusters of two with a brown sheath at base, sometimes minutely toothed.

FLOWERS: May, in clusters near tip of twig, yellow or purple, elongated.

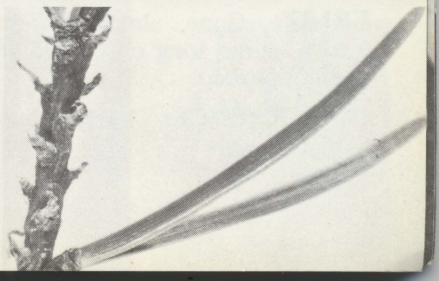
FRUIT: A brown cone 1 to 3 inches long, usually curved, occurring in pairs; scales thickened at tips, cones persist on the trees, usually remaining closed.

OCCURRENCE: Very common in dry to moist habitats throughout the forested region.

CONES



FLOWERS



Eastern White Pine

Pinus strobus L.

FORM: A medium sized evergreen tree with a broadly cylindrical to irregular crown when open-grown; narrower in closed stands.

BARK: Thin, smooth, greyish-green when young becoming rough, dark grey, deeply furrowed with scaly ridges.

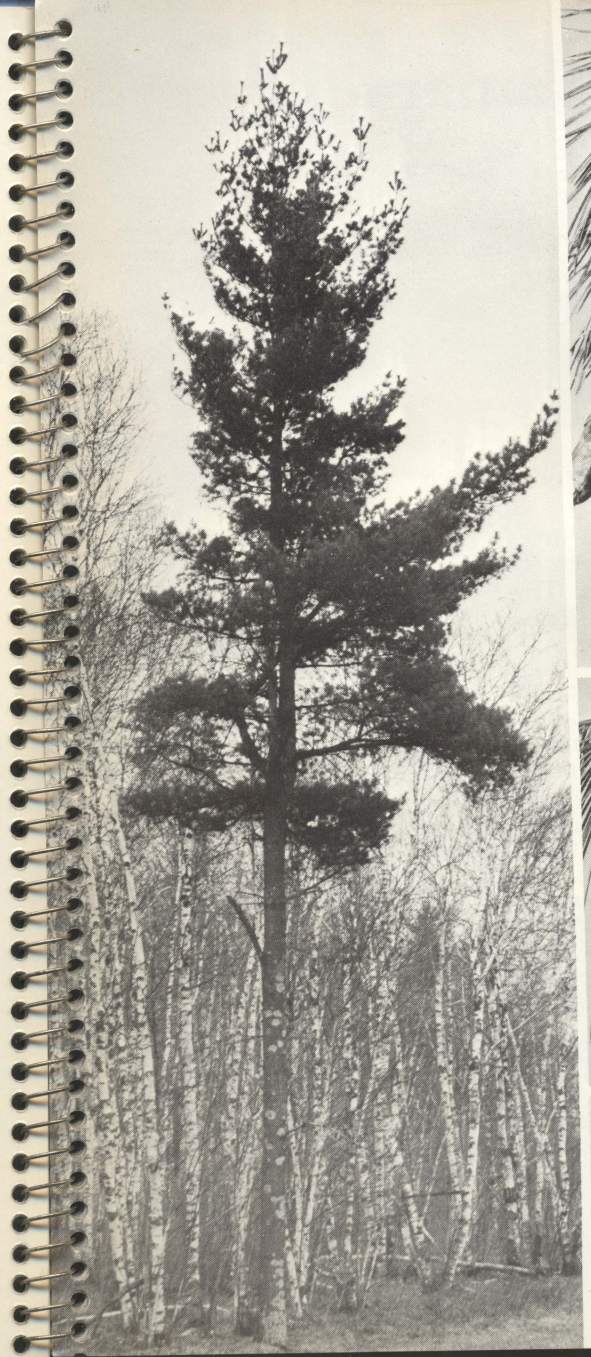
TWIGS: Opposite or whorled, slender, greenish-grey, roughened by leaf bases at first but becoming smooth and brown. Buds ¼ to ½ inch long with light brown pointed scales.

LEAVES: Needle-like, soft, 2½ to 5 inches long, finely-toothed, in clusters of five with a deciduous brown sheath at base.

FLOWERS: May, in clusters near tip of twig, yellowish or pinkish, oval.

FRUIT: Cone, almost cylindrical and sometimes curved, 3 to 8 inches long on curved stems; cone scales thin, brown and not barbed.

OCCURRENCE: Extreme southeastern Manitoba in dry habitats; rare.



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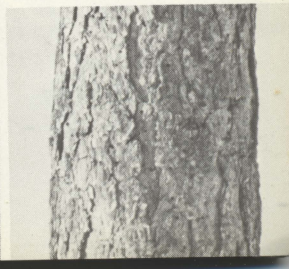
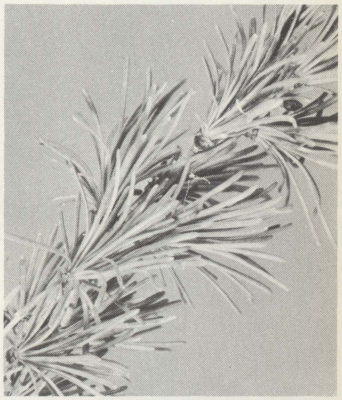


Tamarack

Larch

Larix laricina (Du Roi) K. Koch



FORM: A small tree with an open, light green, usually symmetrical crown. The only conifer that loses its needles each autumn.

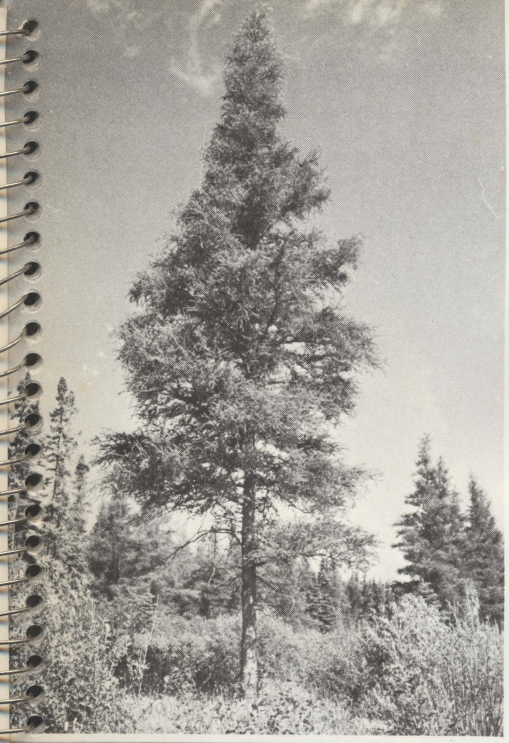
TWIGS: Alternate, slender, flexible, slightly hairy, light brown but darkening with age; roughened by thin scales with upturned tips. Buds with numerous small scales, elevated on spurs on older branches.

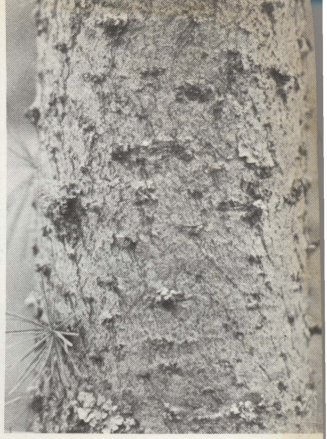
LEAVES: Needle-like, ¾ to 1¼ inches long, in sheathless clusters of 12-20 from spurs on older branches, soft, flexible, pale green in summer and turning yellow in autumn.

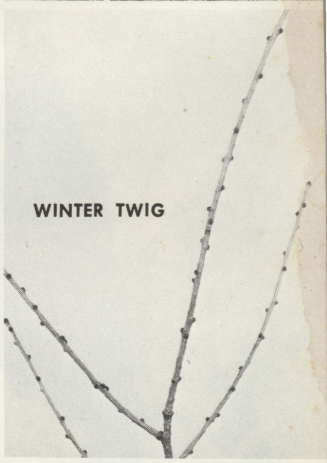
FLOWERS: With leaves, solitary on short spurs, yellow or red, small, semi-circular.

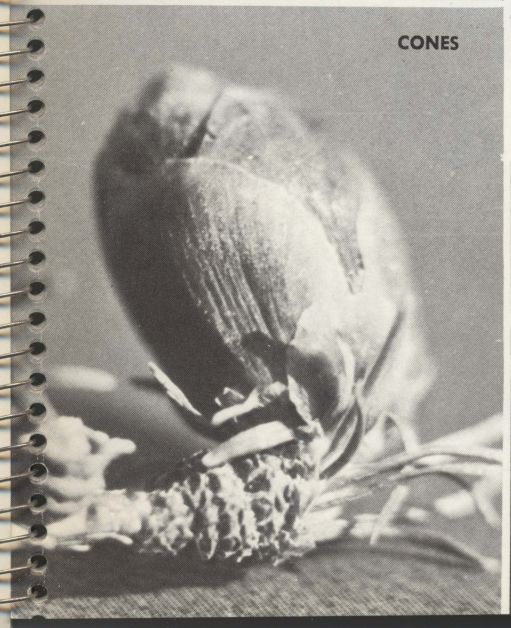
FRUIT: Erect, egg-shaped brownish cone ½ to ¾ inch long, composed of about 20 rounded thin scales.

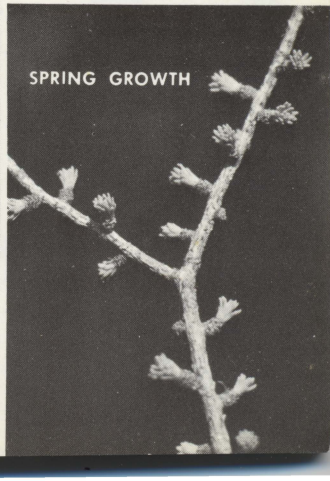
OCCURRENCE: In bogs and wet habitats throughout most of the forested region.











White elm leaves

Deciduous trees...

Manitoba Maple

Box-elder

Acer negundo L.

FORM: Small to medium sized deciduous tree with spreading crown of thick limbs.

BARK: Light brown or dark grey, furrowed into irregular flat-topped ridges.

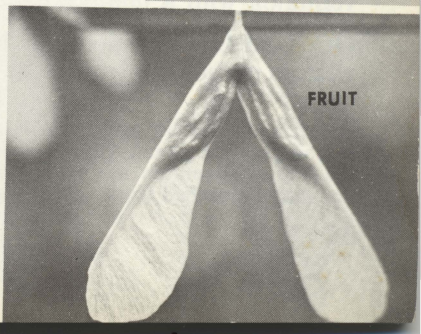
TWIGS: Opposite, stout, smooth, densely fuzzy, at least near tip; green at first but becoming grey to black. Lenticels common, rusty-brown, elongated, often covered by fuzz, at least near tips of current year growth. Terminal bud blunt, about 1/8 inch long, hairy; lateral buds smaller, encased by outer scale that splits at tip revealing bud. Leaf scars semi-circular, narrow, coming together on the sides of twig forming a point; bundle scars inconspicuous.

LEAVES: Opposite, compound, 6-15 inches long, composed of 3-5 coarse-toothed or lobed, paired, leaflets 2-5 inches long.

FLOWERS: Before or with leaves, in yellow-green clusters, male flowers often with conspicuous elongated red-tipped stamens.

FRUIT: Winged, dry, yellowish, ascending, in pairs, each 1½-2 inches long.

OCCURRENCE: Throughout the southern part of Manitoba usually in moist habitats and along stream beds.



Showy Mountain Ash

Sorbus decora (Sarg.) Schneid.

FORM: Large deciduous shrub or small tree with spreading, ascending branches.

BARK: Greyish-brown, thin, smooth, forming loose papery scales on older stems or trunks.

TWIGS: Alternate, greyish-brown, stout, smooth or with shredding cuticle; lenticels several, scattered, elongated, tan. Terminal bud about ½ inch long, conical, smooth, gummy, dark purplish-red, inner scales short hairy; lateral buds smaller. Leaf scars narrow moon-shaped, dark brown with five light brown bundle scars.

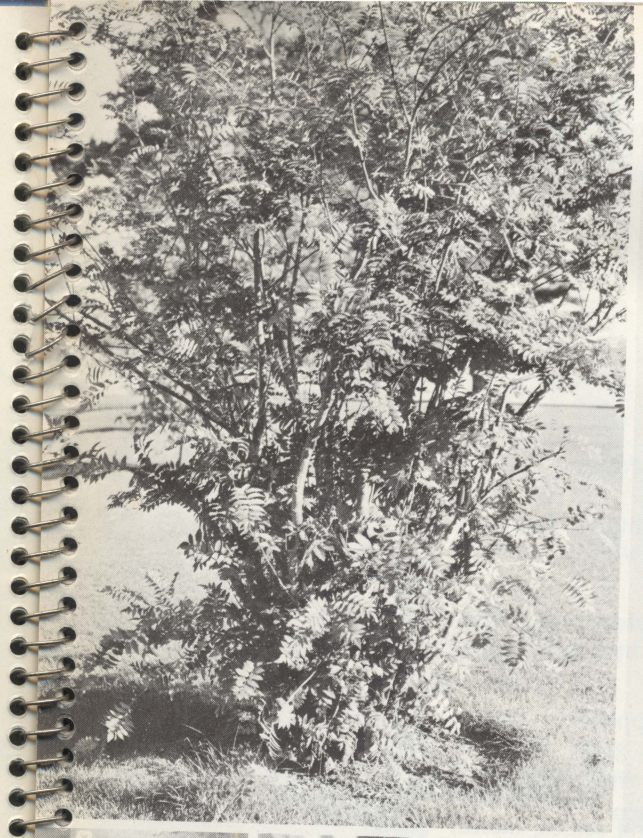
LEAVES: Alternate, compound, 5-10 inches long composed of 11-15 paired, coarse-toothed, conical tipped, oblong leaflets, 1½-3 inches long, 2-3 times as long as broad, blue-green above.

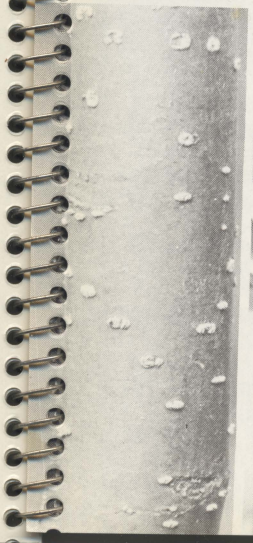
FLOWERS: June, white, about ½ inch in diameter occurring in flat-topped open clusters.

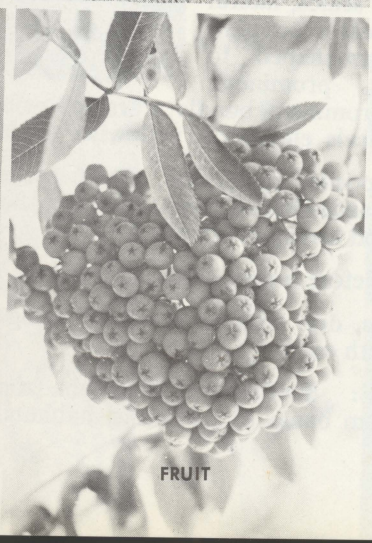
FRUIT: In August, berry ¼-½ inch diameter scarlet or vermilion with a fine powdery covering, in clusters.

OCCURRENCE: Southern half of Manitoba, except southwest, in moist habitats.

American mountain ash (*Sorbus americana* Marsh.) may be found in southeastern Manitoba but is rare. It can be distinguished from the Showy mountain ash by its slender, lance-shaped leaflets which are sharply toothed from tip to base.







FRUIT

Black Ash

Fraxinus nigra Marsh.

FORM: Medium to large deciduous tree with a narrow open crown.

BARK: Greyish, scaly, shallow-furrowed into soft, often spongy, ridges.

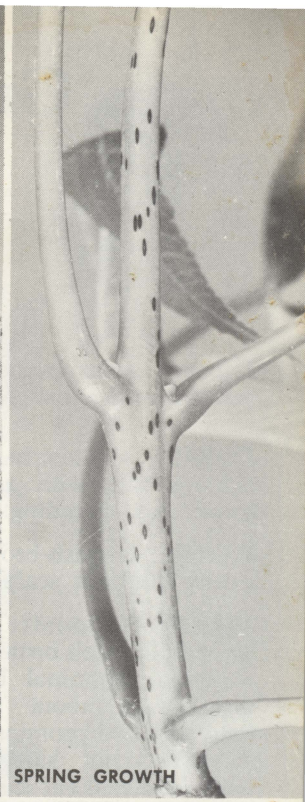
TWIGS: Opposite, round, stout, smooth, grey. Terminal bud about ¼ inch long, dark brown to black, pointed with two large lateral scales; lateral buds smaller, nearly circular. Leaf scars heart-shaped to nearly circular, prominent, with a line of prominent bundle scars following contour of leaf scars. Lenticels elongated, yellowish to dark brown.

LEAVES: Opposite, compound, 10-16 inches long composed of 7-11 lance-shaped, fine-toothed leaflets 3-5 inches long, stalkless and arranged in pairs.

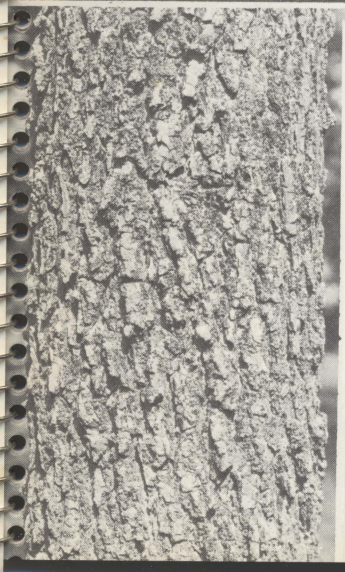
FLOWERS: Before leaves, small, in clusters.

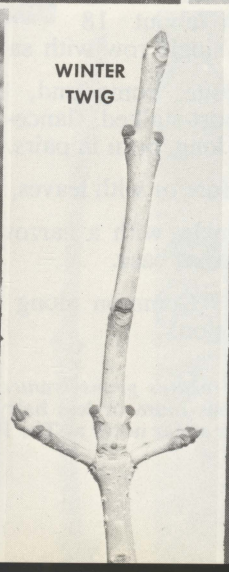
FRUIT: Single, dry, with an elongated wing 1-1½ inches long, blunt at both ends.

OCCURRENCE: Southeastern Manitoba from Lake Manitoba along stream banks and in moist habitats.



SPRING GROWTH





WINTER TWIG

FRUIT

Green Ash

Fraxinus pennsylvanica Marsh.
var. *subintegerrima* (Vahl.) Fern.

FORM: Medium to large deciduous tree with a slender trunk and spreading crown.

BARK: Greyish-brown, furrowed into soft scaly ridges.

TWIGS: Opposite, stout, smooth; lenticels brown, linear, common. Terminal bud reddish-brown, about ¼ inch long with two prominent lateral scales, not hairy; lateral buds smaller. Leaf scars horseshoe-shaped with about 18 bundle scars in a single row with same contour as leaf scar.

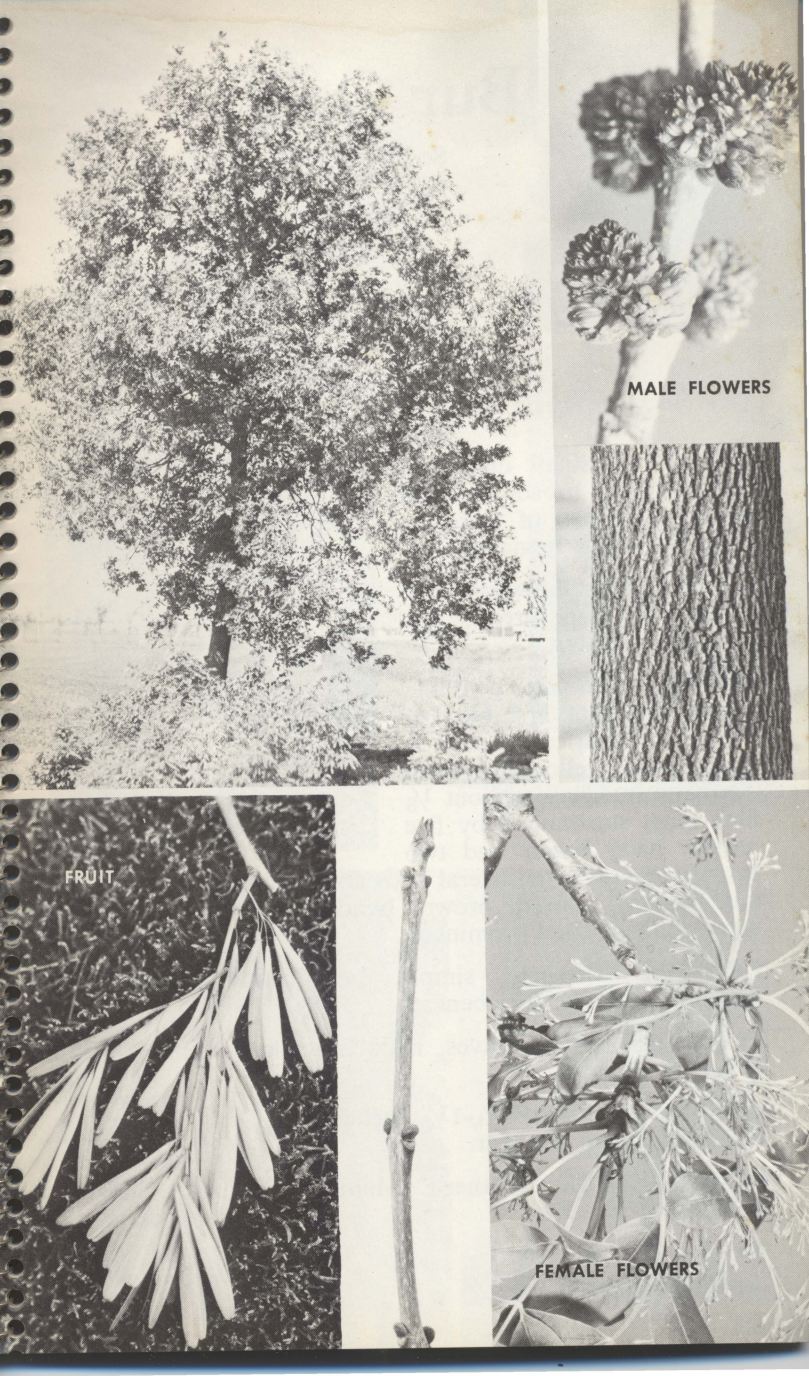
LEAVES: Opposite, compound, 8-12 inches long composed of 7-9 short-stalked, lance-shaped, coarse-toothed, leaflets 4-6 inches long, born in pairs.

FLOWERS: Before or with leaves, small.

FRUIT: Dry, single, with a narrow elongated wing, 1-1¾ inches long, pointed at base.

OCCURRENCE: Common along river banks in southern part of forested region.

Northern red ash (*Fraxinus pennsylvanica* Marsh. var. *austini* Fern.) is very similar but has more or less hairy twigs and buds. It occurs in southern Manitoba as far north as The Pas.



Bur Oak

Scrub oak

Quercus macrocarpa Michx.

FORM: A small deciduous tree with a broad rounded crown composed of variously spreading stout branches.

BARK: Light brown, rough, divided by deep furrows into scaly, flaky plates.

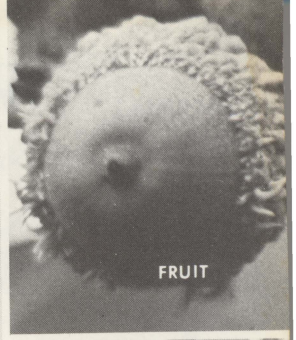
TWIGS: Alternate, stout, ridged, hairy at first but becoming hairless. Lenticels small, oval, yellowish-brown. Terminal bud hairy, about 1/8 inch long, surrounded by five narrow hairy bracts and two or more lateral buds; lateral buds about same size. Leaf scars moon-shaped, raised, brown; bundle scars in two curved rows, yellowish, not prominent.

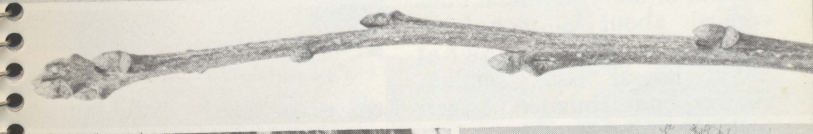
LEAVES: Alternate, simple, prominently lobed, 4-10 inches long, finely hairy beneath.

FLOWERS: After leaves, male in catkins, female single or few in a cluster.

FRUIT: An acorn, 3/4-1 1/4 inches long, half covered by cap, maturing in one year.

OCCURRENCE: Southern Manitoba, usually in dry habitats.





White Elm

American elm

Ulmus americana L.

FORM: A large deciduous tree, slender in dense stands but branching from near the ground in open situations, the limbs large and spreading giving it a graceful, vase-like appearance.

BARK: Dark grey, rough, furrowed when old.

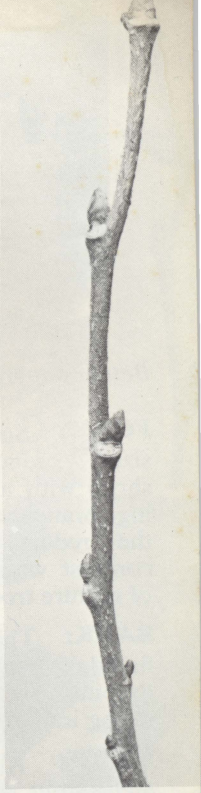
TWIGS: Alternate, slender, smooth or hairy; terminal buds conical, about 1/8 inch long, reddish - brown, somewhat hairy; lateral buds smaller. Flower buds rounded, larger. Leaf scars nearly oval, tan, with about five prominent bundle scars across middle. Lenticels common, yellowish-brown, elongated.

LEAVES: Alternate, simple, oval, sharp-pointed, unequal at base, coarse double-toothed, 3-6 inches long.

FLOWERS: Before leaves, small purplish or yellowish, on long stems in loose drooping clusters.

FRUIT: Oval, dry, one-seeded, flattened, winged with a hairy margin, about 1/2 inch in diameter, usually notched at tip.

OCCURRENCE: Southern part of province on rich, moist, well-drained habitats.



FRUIT

White Birch

Paper birch

Betula papyrifera Marsh.

FORM: Small to medium sized deciduous tree or coarse shrub with ascending, spreading branches. During winter the reddish-brown branches contrast with the white trunk of mature trees.

BARK: Thin, smooth, at first dark but becoming creamy to pinkish-white, easily separating into papery layers.

TWIGS: Alternate, moderately stout, hairy at first but becoming smooth, reddish-brown, shiny. Lenticels numerous, small, circular, yellowish. Terminal bud sharp-pointed, about ¼ inch long, chestnut-brown, curved, slightly sticky and hairy; lateral buds smaller. Leaf scars very small, moon-shaped, with 3 bundle scars.

LEAVES: Alternate, simple, usually triangular, coarse double-toothed, 1½-4 inches long, slender stalked, hairy beneath at least when young.

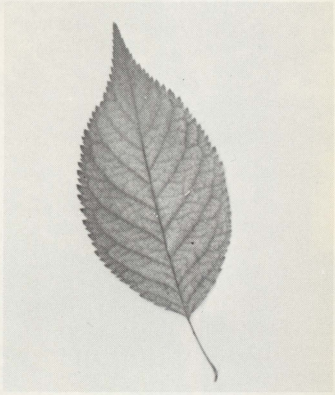
FLOWERS: April to May, in catkins.

FRUIT: A dry two-winged nut less than ½ inch broad in drooping cone-like catkins 1-2½ inches long.

OCCURRENCE: In moist to dry habitats throughout the forested region except far north.

Wild Plum

Prunus americana Marsh.



FORM: Mostly a large deciduous shrub but occasionally tree-like.

BARK: Smooth, grey or reddish-brown on young trees, splitting into curly scales when older.

TWIGS: Alternate, slender, smooth, brown, with thorns. Terminal bud about 1/8 inch long, composed of several small overlapping brown scales with light colored tips; lateral buds similar. Leaf scars broadly heart-shaped, dark brown with a few bundle scars near upper side. Lenticels yellowish, circular, of variable sizes.

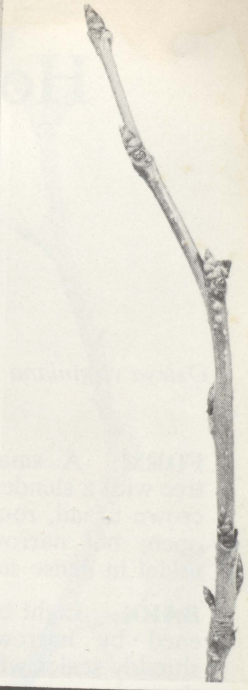
LEAVES: Alternate, simple, oval or oblong, sharp-pointed, 2-4 inches long; teeth sharp-pointed, single and double-toothed.

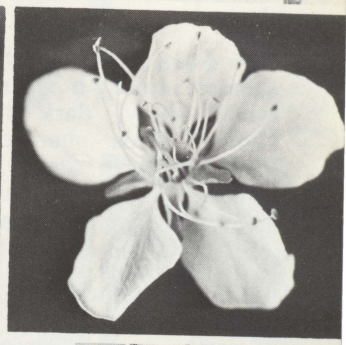
FLOWERS: With or before leaves, white, about one inch in diameter, in clusters of 2-5 flowers.

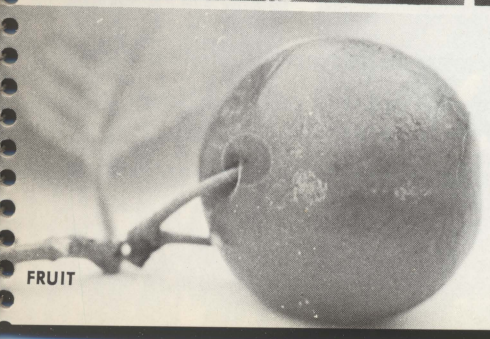
FRUIT: A berry, generally round, orange red in color with a single flattened stone, about one inch long, sour.

OCCURRENCE: Southern Manitoba generally in moist habitats along river channels.

Canada plum (*Prunus nigra* Ait.) is similar but has rounded teeth on the leaves, white flowers that usually turn pink, and a round stone in the fruit. Occurs in southern Manitoba.







Hop-hornbeam

Ironwood

Ostrya virginiana (Mill.)
K. Koch

FORM: A small deciduous tree with a slender erect trunk; crown broad, round-topped in open; but narrow and pyramidal in dense stands.

BARK: Light brown, roughened by narrow, elongated, shreddy scales which loosen at the ends.

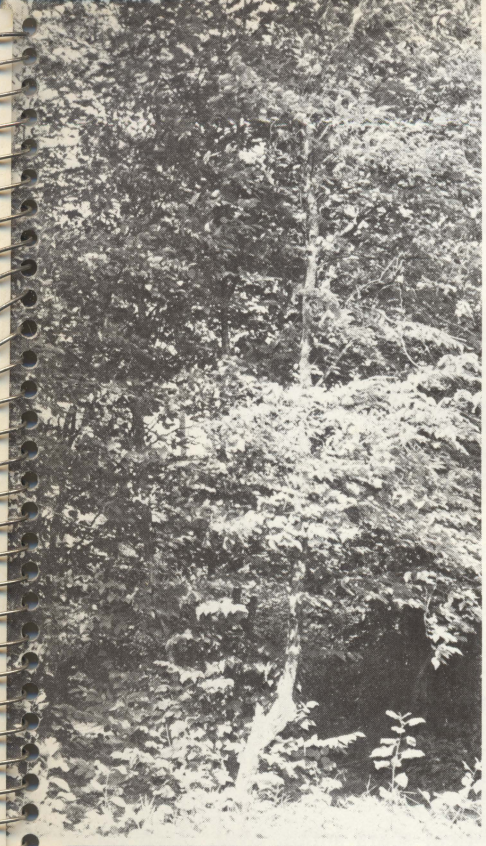
TWIGS: Alternate, very slender, tough, somewhat hairy, shiny, dark reddish-brown. Buds sharp-pointed, chestnut-brown, about 1/8 inch long composed of several scales with light colored margins. Leaf scars small, moon-shaped; bundle scars inconspicuous. Lenticels common, white, small, circular.

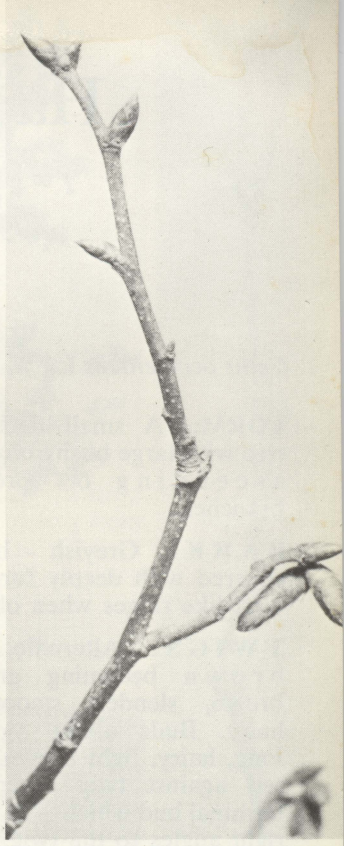
LEAVES: Alternate, simple, oval, tapered at tip, finely double-toothed, thin, 2½-5 inches long, finely hairy beneath.

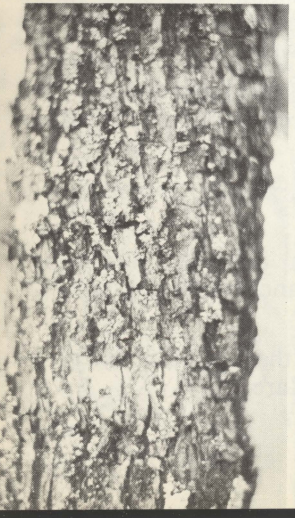
FLOWERS: With leaves; in greenish elongated clusters.

FRUIT: A small greenish nut in a papery bladder growing in dense elongated clusters on slender stems.

OCCURRENCE: In southeastern Manitoba in rich, moist habitats. Rare.







Hackberry

Celtis occidentalis L.

FORM: A small deciduous tree with large bushy crown of ascending or spreading branches.

BARK: Greyish - brown, covered with deeply furrowed wart-like ridges when old.

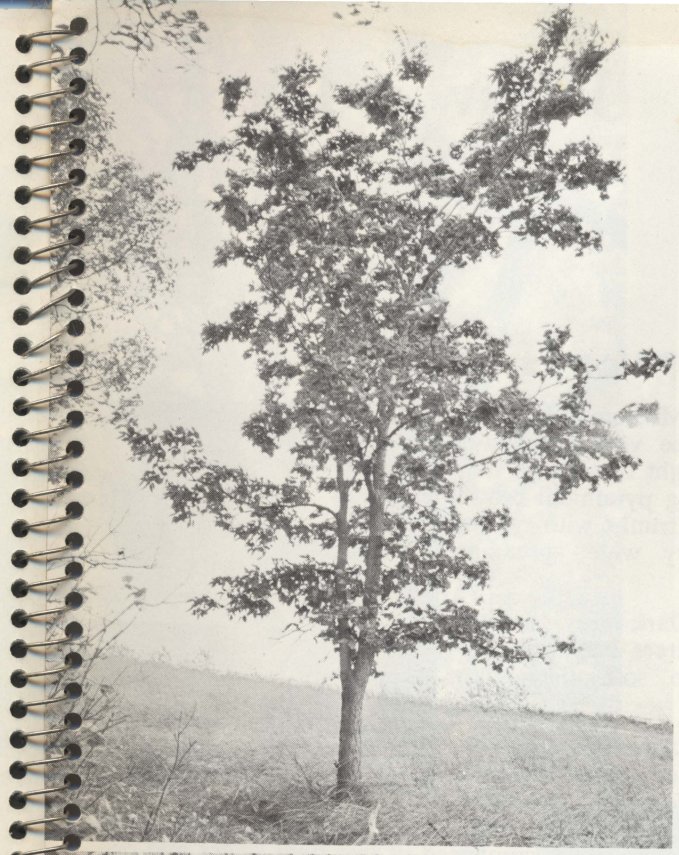
TWIGS: Alternate, rusty-brown becoming greyish-brown, slender, smooth or hairy. Buds about 1/8 inch long, hairy, light brown, pressed against twig except for terminal bud which is at nearly right angles to the twig. Leaf scars small, oval, often raised on short stalks; bundle scars inconspicuous. Lenticels common, elongated, small, yellowish-brown.

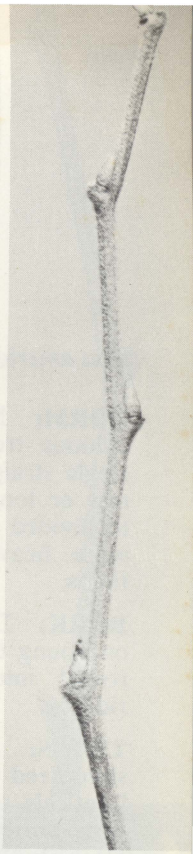
LEAVES: Alternate, simple, oval to lance-shaped, 2-6 inches long, about 3/5 as wide, tapered at tip, sharp-toothed to middle or below.

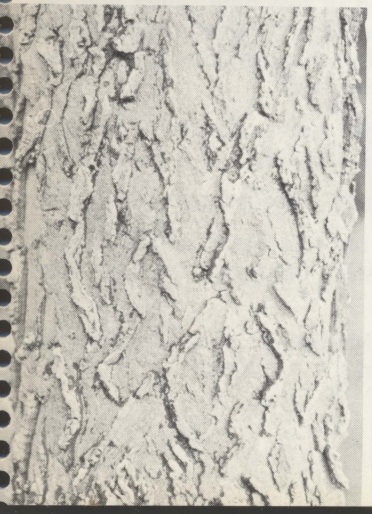
FLOWERS: Before or with leaves, minute, greenish; solitary or in pairs.

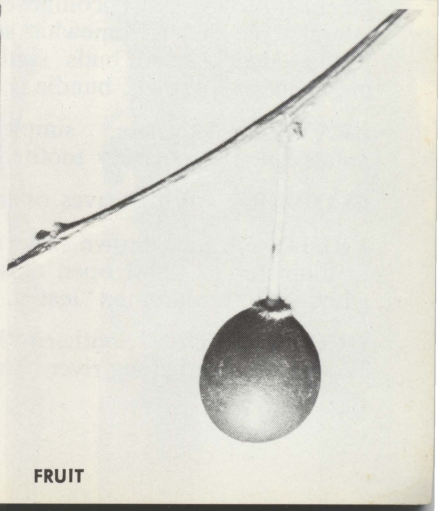
FRUIT: A berry about 1/3 inch diameter, orange-red becoming dark purple at maturity and containing a single hard nut.

OCCURRENCE: Localized along the southern margin of Lake Manitoba, mainly on beaches. Rare.







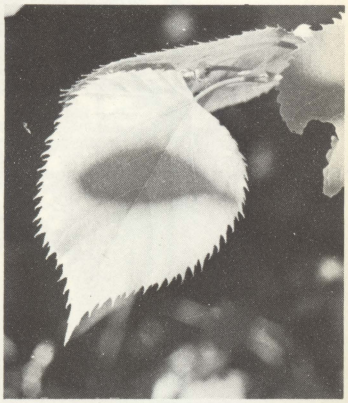


FRUIT

Basswood

Linden

Tilia americana L.



FORM: Medium to large deciduous tree varying from a single straight trunk with narrow or long pyramidal crown to divided trunks with two or more heavy wide - spreading limbs.

BARK: Dark grey, smooth on young trees becoming furrowed into soft, flat, scaly ridges.

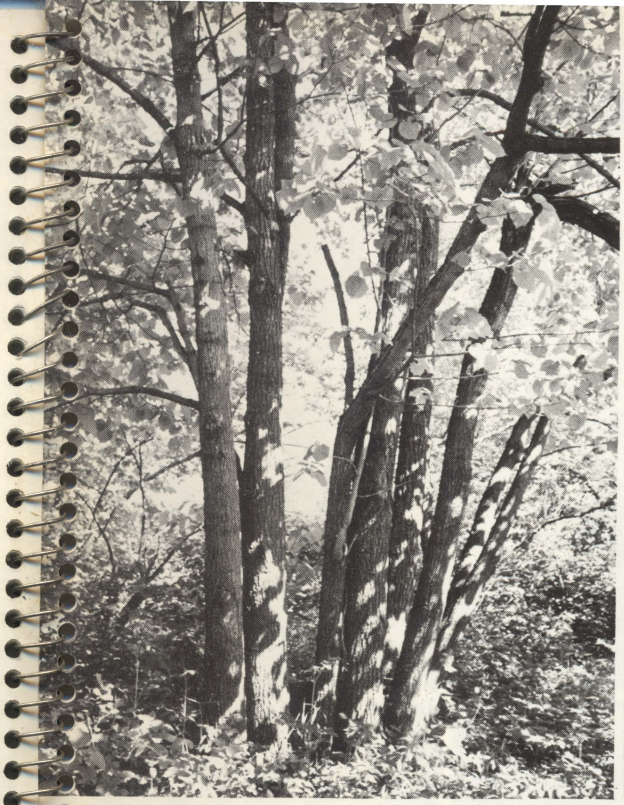
TWIGS: Alternate, smooth, shiny, red or green, wrinkled. Lenticels common, elongated, rusty-brown. Terminal bud broad, about ¼ inch long, greenish-brown, shiny, composed of two tight scales and one lateral scale that is somewhat separated from others making it lop-sided; lateral buds similar but smaller. Leaf scars moon-shaped, brown; bundle scars few.

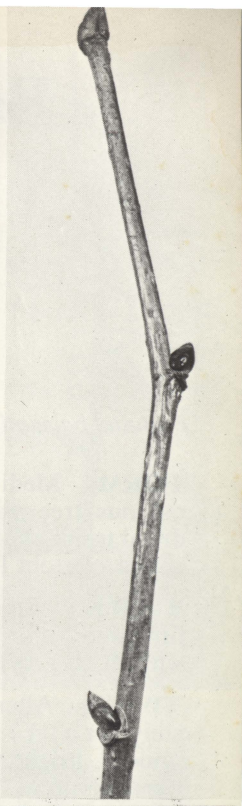
LEAVES: Alternate, simple, heart - shaped, abruptly pointed at tip, coarsely toothed, lop-sided, 5-6 inches long.

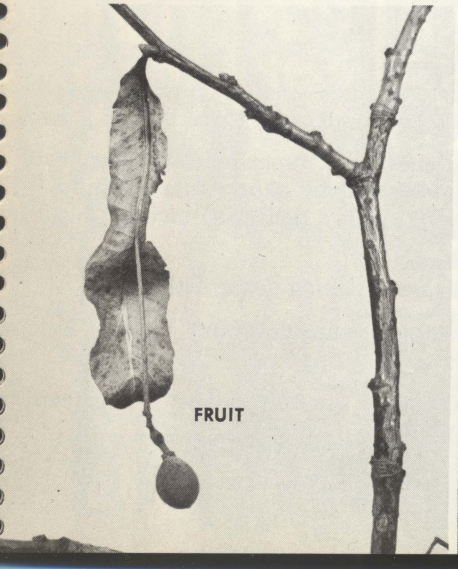
FLOWERS: With leaves or later, cream-colored, fragrant.

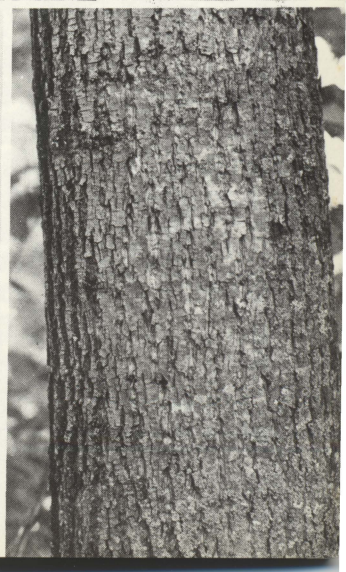
FRUIT: A pale brown hard nut-like berry about ⅓ inch in diameter in small open clusters drooping from an elongated smooth-margined "leaf".

OCCURRENCE: Southern Manitoba from the Spruce Woods eastward along river banks.





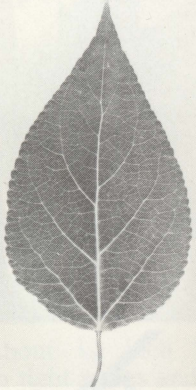




Balsam Poplar

Black poplar

Populus balsamifera L.



FORM: Medium sized deciduous tree with long cylindrical trunk and a narrow open crown of stout limbs.

BARK: Smooth becoming furrowed into thick ridges, whitish to greyish-brown.

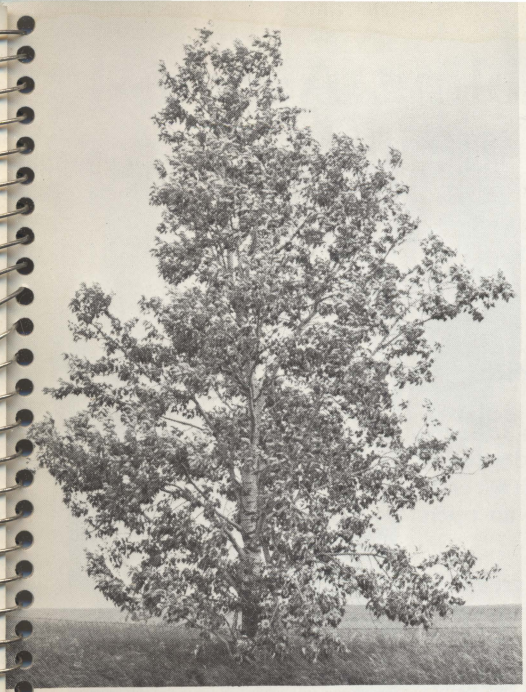
TWIGS: Alternate, moderately stout, round, shiny, smooth, bright reddish-brown. Lenticels few, mostly inconspicuous. Terminal bud sharp pointed, ½-1 inch long, shiny, very gummy with a fragrant odour, chestnut-brown; lateral buds smaller, pressed against twig. Leaf scars moon-shaped, small, with three bundle scars.

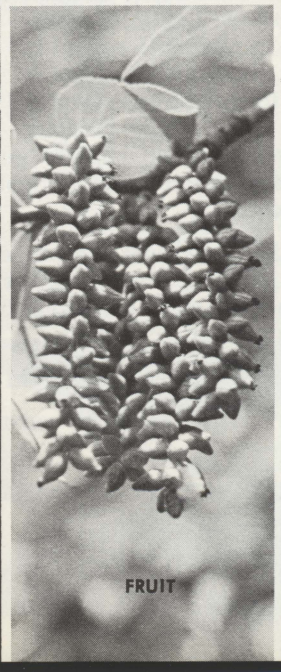
LEAVES: Alternate, simple, oval, tapering to tip, rounded at base (or heart-shaped at base in var. *subcordata* Hylander), fine-toothed, 3-6 inches long, with a yellowish metallic luster on undersurface.

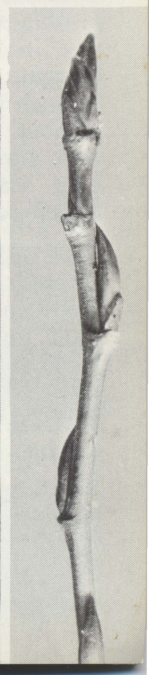
FLOWERS: Before leaves, in drooping dense catkins.

FRUIT: With leaves, smooth, capsule about ¼ inch long in catkins.

OCCURRENCE: Throughout the forested region, except extreme north, in moist habitats.







Trembling Aspen

White poplar

Populus tremuloides Michx.

FORM: Medium to tall deciduous tree with slender trunk and moderately stout ascending branches forming an open round-topped crown.

BARK: Smooth, greenish-grey to whitish, becoming rough and furrowed.

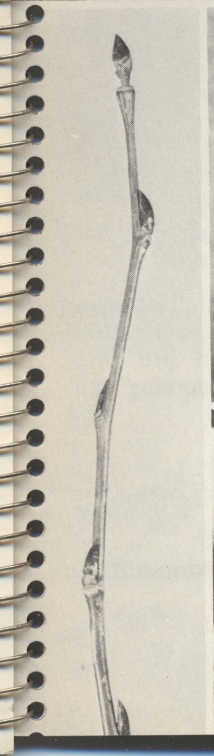
TWIGS: Alternate, slender, flexible, shiny. Lenticels generally inconspicuous, small, elongate. Terminal bud about ¼ inch long, lustrous, usually without hairs, sharp-pointed, with several scales, slightly gummy; lateral buds smaller. Leaf scars moon-shaped, light brown with three raised bundle scars.

LEAVES: Alternate, simple, egg-shaped to nearly circular, abruptly pointed, fine-toothed with numerous rounded teeth, 1½-3 inches long and about the same width, on flattened stalks longer than leaf blade.

FLOWERS: Before leaves, in drooping hairy catkins.

FRUIT: With leaves, a capsule about ¼ inch long in catkins.

OCCURRENCE: Common throughout the forested region in moist to dry habitats.



Largetooth Aspen

Populus grandidentata Michx.

FORM: A medium to tall deciduous tree with moderately stout branches forming a round-topped crown.

BARK: Smooth, greenish-grey to whitish, becoming deep-furrowed at base of old trunks.

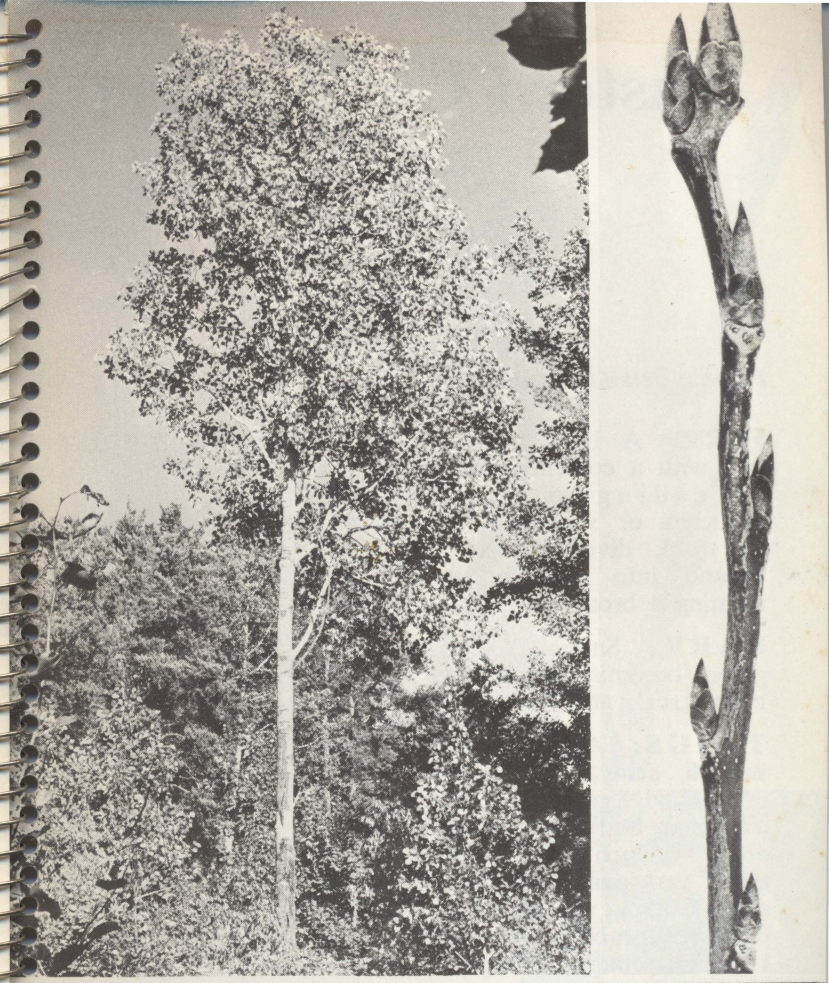
TWIGS: Alternate, moderately stout, stiff, somewhat hairy. Terminal bud dull brown, finely hairy, about ¼ inch long, pointed, lateral buds spreading away from twig. Flower buds larger. Leaf scars crescent-shaped with three groups of bundle scars. Lenticels elongated.

LEAVES: Alternate, simple, 2-4 inches long and of about the same width, sharp-pointed, rounded at base, very coarse-toothed with 5-15 large unequal teeth which are often curved inward at tip; white hairy at first but becoming hairless; on flattened stems.

FLOWERS: Before leaves, in drooping catkins.

FRUIT: With leaves; a hairy capsule ⅛-¼ inch long in loose, drooping catkins.

OCCURRENCE: In southeastern corner of Manitoba in moist habitats along river beds; rare.



Eastern Cottonwood

Populus deltoides Marsh.

FORM: A large deciduous tree with a conical crown of spreading to ascending branches or sometimes with its trunk dividing near the ground into massive limbs forming a broad open crown.

BARK: Smooth, yellow-green becoming deeply furrowed, scaly and grey.

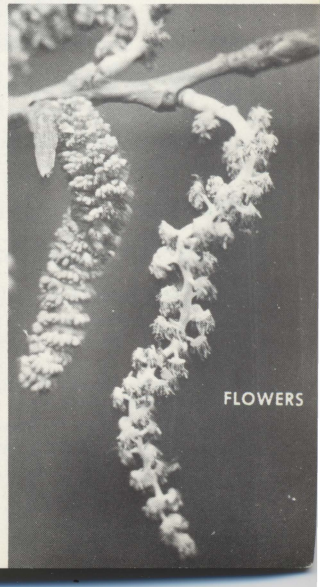
TWIGS: Alternate, stout, smooth, shiny, often 4-sided or ridged, greenish-brown. Terminal bud sharp-pointed, about ¾ inch long, chestnut or greenish-brown, smooth, shiny, very gummy, outer scales hairy at base; lateral buds similar, about ½ inch long. Leaf scars roughly elliptical, light greenish-brown; bundle scars in three prominent groups. Lenticels common, elongated, straw colored.

LEAVES: Alternate, simple, triangular, with coarsely rounded teeth, somewhat hairy, 2-4 inches long and about the same width, stalk flattened near base of leaf.

FLOWERS: Before leaves, in drooping catkins.

FRUIT: A capsule about ⅓ inch long in catkins.

OCCURRENCE: Common in southern Manitoba along river beds.



Peachleaf Willow

Salix amygdaloides Anderss.

FORM: A large deciduous shrub to small tree with somewhat drooping branches.

BARK: Smooth becoming ridged and more or less scaly, reddish-brown.

TWIGS: Alternate, flexible, yellowish becoming darker, shiny. Lenticels few, mostly small and brown but some are larger, linear and yellowish. Buds small, dark shiny brown with tan bases, largest along middle of twig, these about 1/8 inch long, with only one scale, somewhat lop-sided. Leaf scars very small, inconspicuous, with three bundle scars.

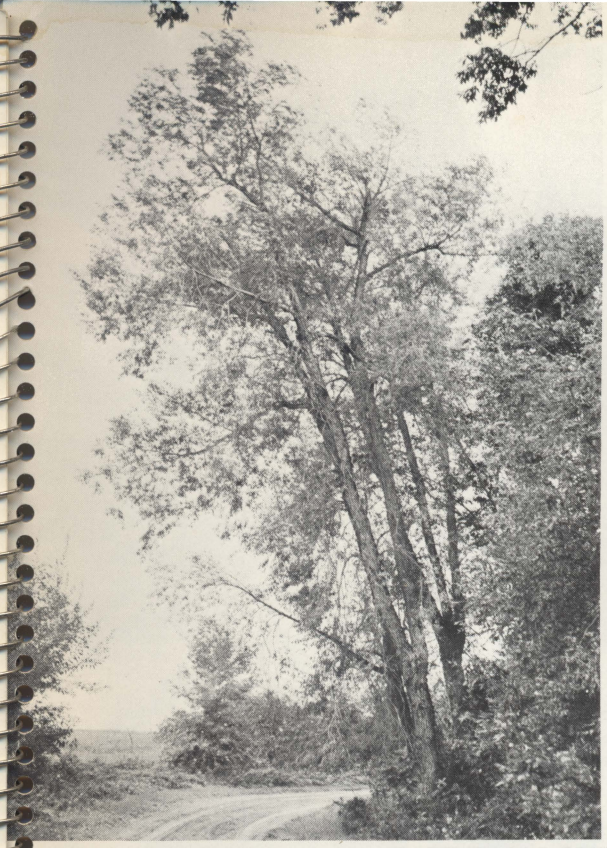
LEAVES: Alternate, simple, lance-shaped, 2-4½ inches long and ½-2 inches wide, narrowed or rounded at base, narrowly tapered at tip, finely toothed, stem slender, green above, whitish below.

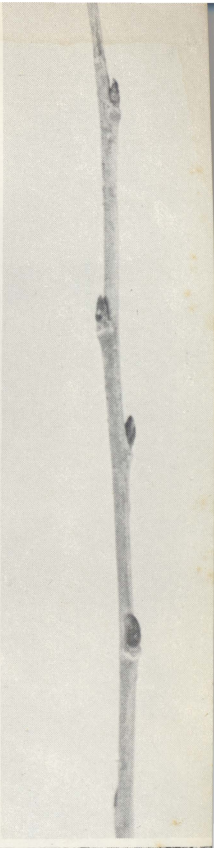
FLOWERS: Before leaves, in catkins.

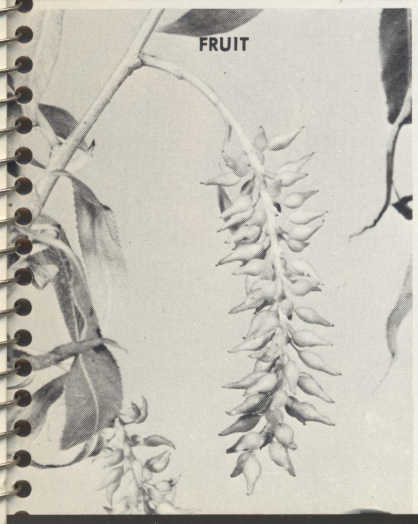
FRUIT: A capsule in catkins on short leafy branches.

OCCURRENCE: Along stream beds in southern part of Manitoba; rare.

Black willow (*Salix nigra* Marsh.) and Crack willow (*Salix fragilis* L.) are similar but have narrower, somewhat curved leaves up to 6 inches long. Black willow has conspicuous leaf-like stipules at base of leaf stalk on young twigs which are lacking on Crack willow.







Eastern cottonwood, near Carman.